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ABSTRACT

While alcoholism and problem drinking is not as prevalent among women as men it nonetheless is a serious health concern, deserving greater attention. Investigation results comparing the consumption and problem drinking patterns of women with men finds that lower consumption rates among females cannot be explained by body weight as men drink more both in absolute terms and in relation to their body weight. Problem drinking for men also was higher except in some instances indicating that females experience different problems not fully measurable at present. Employment among women has a different relation to drinking than among men. Past research fails to provide definitive conclusions about the importance of women's social roles and drinking patterns. Social sex role variables, however, suggest that abstention correlates with older age, lower SES, Protestant religion, and "dry" regions. Heavy and problem drinkers show neither consistent role nor social variables, but divorced or unemployed women have the highest rates of problem and heavy drinking, as do married employed women. Further research is needed to define the implications. (LS)

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Working Women and Alcohol Use: Preliminary National Data*

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It has been widely documented in previous work that compared to men, more women abstain, drinking women consume less, and fewer women are alcoholics. Yet conservative estimates place the number of women alcoholics in the U.S. at 900,000 or 20 percent of the total number of alcoholics (4). If women with drinking problems (but not yet alcoholic) are included, it would raise this number to over 2 million. Thus, even though alcoholism and problem drinking may not be as prevalent among women as among men, it is nonetheless a very serious health problem and one deserving greater attention.

In January, 1975, NIAAA surveyed a nationally representative adult sample of 1028 males and 1125 females concerning drinking practices (27). The data were collected for the purpose of measuring the effects of an anti-alcohol abuse education campaign (28). Although these data were not designed for this purpose, they do provide important new information concerning differences between men and women in drinking patterns. This report summarizes the results of investigations that address the following major questions:

- What are the consumption and problem drinking patterns for women, and how do they compare to men's patterns?

- What is the impact of sex role factors on women's drinking patterns?

CONSUMPTION PATTERNS FOR MALES AND FEMALES

A study of alcohol use and abuse must start with actual alcohol intake. Although the relationship between consumption and alcoholism or problem drinking may well be affected by many physiological, social and psychological factors, it is obvious that abuse cannot occur without consumption in

the first place.

General issues in measurement of consumption have been discussed in a previous report (1). One measure used widely in research is a combination of the quantity and frequency of consumption, the QF index.[1] This index measures total alcohol consumption expressed as the average amount of absolute alcohol consumed per day.

However, special problems arise in the comparison of consumption between men and women. This is because women on the average weigh less than men, so that the same amount of alcohol consumed yields a higher concentration with presumably stronger effects for the average woman than for the average man. In order to assess the likely effect of alcohol, we have developed a measure that corrects for an individual's weight; we have designated this the Blood Alcohol Content (BAC) index. The BAC index would be the percent of alcohol, by weight, in the bloodstream if a person

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[1]A standard quantity-frequency (QF) index was computed by multiplying how often a person drinks (in percent of a day) by how much they drink in a typical day, (in ounces) correcting for the percent of pure alcohol in beer, wine, and liquor (4, 15, and 45 percent, respectively). The QF index thus reads "X" ounces of pure alcohol per day.

The Blood Alcohol Content (BAC) index reflects the person's QF converted to percent of alcohol by weight in the bloodstream. It is computed by the formulas:

$$BAC = QF/(.14\ w) \text{ for men and}$$
$$BAC = QF/(.12\ w) \text{ for women}$$

QF is the quantity-frequency of actual alcohol intake, w is weight in pounds. The constant .14 represents .7 (proportion of body that is fluid) times 16 (pounds to ounces) divided by .8 (specific gravity of alcohol) divided by 100 (as BAC is a percentage). For women the proportion of body fluid is .6, so the constant is .12.

The BAC measure gives the maximum BAC a person could have if they actually drank their daily average consumption (QF) in one to two hours. Of course, since the QF is expressed as a daily average, it is quite possible that persons not drinking every day have drinking days on which they drink more than their daily average, thereby attaining a higher actual BAC.

consumed the alcohol measured by their QF at one sitting each day. Practically speaking, the BAC index measures the presumed average effect of consumption as assessed by the QF mentioned above. A lighter person consuming the same amount of alcohol as a heavier person would obtain a higher BAC score.

We categorized persons into lighter, moderate and heavier drinkers according to their BAC index scores. In order to make these divisions, we used the same criteria as the QF index, but as applied to a male of average weight. That is, we translated the QF index scores for a 170 pound male for the lighter, moderate and heavier QF categories into our BAC categories. Thus, a 1.0 QF (2 drinks a day) for a male of average weight becomes a .04 BAC and defines the lower limit of a heavier drinker. A female of average weight with a .7 QF (1-1/2 drinks a day) would also have a .04 BAC and be categorized as a heavier drinker. It should be noted that the "heavier" category does not connote an unsafe BAC; legal intoxication is usually defined to be in the range from .08 to .10. Thus the "heavier" drinkers by our definition are not necessarily excessive drinkers. The following definition will be used in all of our analyses:

Category	
Abstainer	Drinks less than once per year
Lighter	BAC from 0 to .009 per day
Moderate	BAC from .01 to .039 per day
Heavier	BAC .04 and higher per day

Sex Differences for the BAC Index

Table 1 presents the differences between men and women for the BAC index of consumption. The major differences in consumption between men

Table 1

BAC INDEX FOR MALES AND FEMALES

Sex	Percentage in each BAC Category				(N)	Drinker's Average BAC[a]
	Abstainer	Lighter	Moderate	Heavier		
Males	25	24	29	22	(985)	.039
Females	44	27	20	9	(1089)	.022

[a]Mean of the BAC score for persons in the three drinking categories.

and women are in abstention and heavier drinking. Men have less than half the abstention rate of women, but more than twice as many heavier drinkers. Males also have a greater percentage of moderate drinkers, but little difference is found in the lighter drinker category.

The average BAC for drinkers is also shown in Table 1. Even among drinkers, men show a higher average BAC than women (the median BAC is .017 for men and .010 for women). Moreover, men have a higher rate of heavier drinking when abstainers are excluded (29 percent compared to 16 percent). It is clear, then, that lower consumption rates for women cannot be explained by body weight; men not only drink more in absolute terms, they also drink more relative to their body weight.

PROBLEM DRINKING

There is some concensus among experts that problem drinking or alcohol abuse cannot be defined solely in terms of alcohol consumption unless it is extremely high, such as 5 ounces of ethanol/day or the equivalent of 3/4 pint of hard liquor per day. Problem drinking, defined as behavioral or social impairment from alcohol, can occur at much lower levels of consumption.

Alcohol abusers can be identified through the use of the problem indices included in the survey. These indices measure behavioral symptoms of alcohol dependence, or actual physiological and social consequences of excessive alcohol use.

The 1975 survey asked respondents to indicate how often or whether they had experienced any of three sets of problems. One set consisted of dependence symptoms including "taking a drink to feel better" and "drinking alone," or "gulping drinks." The second set consisted of more serious dependence

symptoms, such as "blackouts" or "morning drinking." The third set consisted of serious tangible consequences such as "spouse left" or "arrested" because of alcohol use.

A problem drinking index was defined by combining various scores on the symptoms and consequences items with the BAC index of consumption. After conducting a number of factor analyses and correlating various symptom, consequences, and consumption variables the following definition was adopted: a problem drinker is a person who has a BAC score of .04 or higher and who has either (1) one or more serious consequences, (2) one or more serious symptoms, or (3) a higher-than-average score on an index formed on the set of dependence symptoms where the average is taken to be the median for the respondent's sex.[3] The reason for establishing the latter criterion relative to the median for each sex reflects our concern that this particular set of symptoms might be unduly biased towards male-specific drinking behaviors.

Table 2

TOTAL PROBLEM DRINKING RATES FOR MALES AND FEMALES

	Percent of Problem Drinkers among[a]			
Sex	Drinking Population	Drinking N	Total Population	Total (N)
Male	25*	(740)	16*	(985)
Female	13*	(458)	5*	(1089)

*Statistically significant sex difference ($p < .01$).
[a]Excludes semi-abstainers (drink 1-6 times a year) who were not asked problem questions.

[3]See Johnson, et al. (20) for detailed definition of the problem drinking index.

We recognize that this definition embodies some fairly arbitrary combinations of drinking behaviors, and that other definitions are clearly possible (20). Unfortunately, the available data do not permit a more detailed definition such as that used in the recent works of Cahalan and Room (8). Therefore, while we believe our definition to be a reasonable one, given the present data sources, we present it primarily for the purpose of comparing groups rather than for establishing the absolute level of alcohol abuse.

Table 2 shows the percent of problem drinkers, so defined, for both men and women. This definition yields a problem drinking rate of 16 percent for the total sample of men (including abstainers) and 5 percent for the total sample of women. We note that this broader definition of problem drinking generates higher rates than those shown in Armor, et al. (1) and it is quite possible that the present criteria are too inclusive for a rigorous definition of problem drinking. Rather than endorse these rates as absolute levels, we are more comfortable with the conclusion that the rate of serious problem drinking lies somewhere in the range from 10 to 16 percent for all men and 3 to 5 percent for all women.

In concluding that men have a higher rate of problem drinking than women, a general caveat must be offered. While men scored higher than women on most indicators, there were a few instances where women showed higher rates. This raises the possibility that women experience different kinds of alcohol abuse problems not fully measured by the present instruments. Future research on women's alcoholism should take this possibility into account when designing problem drinking indices.

EMPLOYMENT STATUS

Three employment status categories are possible with our data: being currently employed, being unemployed but (presumably) looking for a job, and not in the force. The latter category is comprised primarily of housewives, retirees, and students.

Table 3 shows that the employed women (30 percent of all women in this survey) have a slightly higher percentage of heavier drinking and the fewest abstainers whereas the unemployed women have the highest average BAC. For males, the unemployed are clearly heaviest drinkers on both BAC and the heavy drinker category. Abstention rates are similar in the employed and unemployed males. Thus, out of the three criteria for alcohol use studied here (percent drinking, percent heavier drinking, and average BAC) employed women score highest on two whereas unemployed men score highest on two. This indicates that employment in women has a different relationship to drinking than in men. Unemployment has been labeled as the greatest crisis a male can face (6), while employment for women may place them in difficult situations such as role conflicts or unpleasant low paying jobs.

The women not in the labor force are primarily housewives, while not-in-force men are primarily retired. Thus the retired men are older and tend to drink less than the younger working men and, in fact, in amounts similar to the housewife.

In all subgroups, the women's BACs and percentage of heavier drinkers are lower than men's. In addition, the percentages of abstainers are greater for women in all employment groups. We will explore the issue of female employment more fully below.

Table 3

SEX AND EMPLOYMENT DIFFERENCES IN CONSUMPTION

Employment Status	Percent in BAC Categories					Drinker's Average BAC
	ABST	Lighter	Moderate	Heavier	(N)	
Females						
Employed	38	27	25	10	(303)	.019
Unemployed	51	21	19	8	(46)	.034
Not in force	47	28	19	7	(635)	.017
Males						
Employed	21	23	32	24	(672)	.036
Unemployed	22	29	13	36	(51)	.114
Not in force	52	24	16	8	(156)	.023

WOMEN'S ROLES AND ALCOHOL USE

This section will focus on the relationship between women's sex roles and drinking behaviors. The first part will begin with a review of some of the more important research on women's alcohol problems, with emphasis on special etiological theories. This review will generate various hypotheses concerning social and psychological factors that contribute to heavy drinking and alcohol abuse among women. In the second part we will attempt to examine those hypotheses which are testable with data from the 1975 survey.

Alcohol Abuse Among Women

Previous etiological research has shown that no single factor or class of factors seems adequate as an explanation of alcoholism's occurrence (2). Armor and his colleagues have concluded that past research shows that alcoholism is "most likely an 'overdetermined' disorder with multiple causes and a complex developmental course" (p. 21), and that "a great range of sociological, cultural and psychological variables can be invoked to account for variance in problem drinkers" (p. 22). Parallel to the theory that alcoholism is multiply determined is the theory that there is more than one type of alcoholic, and that each type may be the result of separate processes of interacting social, cultural and psychological factors. The theory of multiple types has received special attention by researchers who study women and alcohol.

On the other hand, given the heavy emphasis on alcoholism among men, not all of the etiological processes which have figured prominently in past research have received substantiation in recent research on women's alcoholism. For example, at the present time hypotheses that female alcoholism is related to psychological needs for dependency, power, or masculinity have met with little substantiation (4; 2). In addition, research on specific personality types and on the role of physiological malfunctioning in women's alcoholism have presented conflicting findings (4; 34). Some of the conflicting findings in this and other alcoholism research are due to methodological and conceptualization problems. One of the primary methodological problems is the lack of distinction between the pre- and post-alcoholic stages in the development of psychological and physiological characteristics. That is, some of these characteristics can be caused by, as well as a cause of, alcoholism. In fact, Trice (39) suggested that this two-way interaction of causes and effects needs intensive study. A second methodological problem is that early research often neglected to consider the possibility of more than one subtype of female alcoholism which would allow several different etiologies, each with unique causal factors.

Recent research has directly entertained the possibility of several subtypes of female alcoholics and has employed multicausal models (4; 32; 34; 44; 45). These researchers have taken into account an array of both psychological and social background factors in female alcoholism.

The work in the area of psychological factors has thus far shown that female alcoholics as compared to male alcoholics are more likely to attempt suicide (e.g., 28; 46; 36) and showed more depression, anxiety, and guilt and lower self-esteem (e.g., 22; 48; 5; 19). Critics of the literature (e.g., 4; 34) have pointed out an additional methodological difficulty that applies to these studies: many of the differences in men and women alcoholics are similar to those between men and women in general, and thus cannot be unitary causes. This is true of the affective disorder of depression: women in the population show more depression than men. However, depression also differentiates women alcoholics from non-alcoholic women (e.g., 5; 23; 12; 26).

Researchers have also taken into account differences in social background between men and women alcoholics. Women alcoholics have been found to be more likely to have alcoholic family members and spouses (e.g., 11; 28; 36), fewer arrests (e.g., 28; 29) and specific life stresses prior to the onset of alcoholism (e.g., 10; 11; 42).

To develop subtypes of women alcoholics, Wilsnack and Beckman have integrated these results with findings in the area of sex role identity and conflict, and have begun delineating role related etiologies of alcoholism in women. Schuckit and his colleagues and Beckman have also developed a set of possible subtypes of female alcoholics based on social and psychological characteristics.

Both the above sets of approaches constructed multifactor hypotheses in order to identify sets of possible causes of alcoholism in women. Two basic approaches and some of their evidence, arguments and conclusions though overlapping, will be discussed under headings of (1) Sex Roles, (2) Psychological Factors and (3) Social Background.

Sex Roles

The present focus on sex role-related factors in the study of women and alcoholism grows out of research dealing with both psychological and social implications of sex roles. The psychological work consists primarily of Wilsnack's (42; 44; 45) studies of "needs for womanliness" and internal conflicts between masculinity and femininity as etiological factors in women's alcoholism. This research followed from and improved upon earlier psychoanalytic theory in the area of inadequate feminine identification (e.g., 40). The social thrust in the study of sex roles and alcohol is the recognition of the potent effect of sex role expectations on the behavior and well-being of both men and women. Beckman (3, 4) Wilsnack, (44; 45), and Schuckit and Morrissey (34) have suggested subtypes of alcoholics based on socially defined sex roles and role conflicts on interpersonal levels. The psychological approach will be examined under the concept of *womanliness*, and the more social and interpersonal under the heading of *social sex role conflict*, although there is considerable overlap. Both these approaches recognize the probability of more than one subtype of woman alcoholic, each with unique etiologies stemming from different types of internal and external sex role conflicts.

Womanliness. Wilsnack's (42) work on woman and alcohol began with the testing of two etiological models from the psychoanalytic tradition of psychology. Both of these models hypothesize that alcoholism results from unconscious conflicts or tendencies which cause stress; excessive alcohol consumption is functional in reducing this stress. The first model hypothesizes that excessive alcohol consumption is a result of feelings of powerlessness, and that alcohol provides an aura of competence. Although there has been some support for this hypothesis with males, Wilsnack found no support for women. The second model proposes that excessive alcohol use relieves the conflict between dependency and autonomy needs by allowing expression of either dependent or counter dependent behavior. Wilsnack likewise found no support for this hypothesis for women. She also found no

support for the related idea that drinking might satisfy needs of women who have unconscious masculine strivings.

In fact, Wilsnack found some evidence for the contrary--that drinking enhances feminine identity. This led her to the conclusion that women who feel particularly inadequate as women may drink to feel more feminine, and this can lead to alcoholism. Wilsnack proposes one type of female alcoholic who does not reject femininity nor strive for masculinity, but who tries to conform to traditional sex role expectations, and has difficulty integrating masculine and feminine styles. Wilsnack describes the cycle as follows: "When some new threat to her sense of femininity adequacy occurs (e.g., a divorce, miscarriage, etc.), she may turn to alcohol, perhaps in an attempt to feel temporarily more adequate. The typical consequences of heavy drinking, however, further undermine her feminine adequacy and may begin a vicious circle which eventually culminates in her complete dependence on alcohol." (45, p. 6).

Several other types of internal conflicts are possible. Beckman (3) found that about 23 percent of her alcoholic samples showed unconscious masculine identification and overt feminine style while 16 percent of her other 'psychiatric' sample and 13 percent of her 'normals' showed this syndrome. Both Wilsnack and Beckman emphasize that while such identification may be a causal factor in women's alcoholism, not all women alcoholics show it, and many women do not show any problems in association with this type of identification.

In other work, Wilsnack (44) has also found that heavier drinking non-alcoholics tended to have overt masculine styles (as measured by assertiveness), and Parker (26) did find masculine style along with unconscious feminine identification in a sample of women alcoholics. However, in Parker's work it is difficult to know if these characteristics preceded or followed the development of alcoholism. In addition, Beckman found a relatively small percentage of overt masculinity-unconscious femininity in her sample of female alcoholics. This syndrome may be represented primarily among low SES women (see below). Thus, an overt masculine style may not be a contributor to alcoholism in and of itself.

Wilsnack (44) suggests that all of this implies alcoholic women may have problems being androgynous; that is, responding in ways other than stereotyped masculine or feminine behavior. She cites findings by Colman (9) that alcoholic women are characterized by a lack of sex role flexibility. Beckman (3) found support for this hypothesis. Her data showed that alcoholic women scored high on feminine style and lower on masculine and androgynous styles than their "normal" controls. Beckman also interprets this to mean that lack of integration of traits may be associated with maladaptive behavior. Thus the hypothesis emerging from research on internal sex role issues is that poorly integrated masculine and feminine characteristics of one's personality may be a predisposing factor for female alcoholism.

Social Sex Role

Sex role conflict is not limited to intra-psychic events. A woman may experience role conflict in her interpersonal relationships and between the social roles society expects her to play. Several typical role conflicts have been defined by sociologists. One type of interole conflict occurs when a person is in two roles with conflicting expectations at the same time--for example, a wife who works may face day to day conflicts between her wife and work role. A second type of role conflict occurs between a person's identity and the cultural or interpersonal demands for another type of behavior. This could occur for a woman who sees herself as traditionally feminine (e.g., yielding, empathetic) and is in a situation that demands traditionally masculine behavior, for example, supporting herself and her children. Another example would be a woman whose traits are more traditionally seen as masculine (e.g., competent, assertive) and who runs into interpersonal conflicts when she is expressing herself competently (21).

Another type of role conflict occurs when a woman is expected to perform the same role differently by different people who interact with her in that role. Thus regardless of a woman's own identity, she may not be meeting the conflicting role expectations of others in the environment.

Sex roles do not need to conflict to provide stress. Non-traditional roles themselves can be stressful for women. Other theorists look at roles not in terms of stress and conflict which then affects drinking behavior, but in terms of the direct expectations and opportunities for drinking that certain roles carry. A woman in a non-traditional job may drink more, simply in response to general expectations for a person in her position to do so, or because the people around her are drinking a lot.

Beckman (4) explicitly extended sex role conflict to include social factors, noting that externally based role conflicts may suggest treatment strategies which help redefine in society what is appropriate behavior without tying people to sex roles. In addition, she suggests that treatment can help female alcoholics gather the strength to face the consequences of non-traditional behavior. Wilsnack (44) also recognizes that "sex role conflict and sex role stereotyping per se" may be an important source of stress contributing to women's drinking problems.

Schuckit and Morrissey (34) suggest that "sex role confusion," (an unfortunate term referring to women in nontraditional life styles who have conscious feminine values) may contribute to alcoholism for women who are more traditionally masculine in their lifestyles and thus accept masculine drinking styles. They present data on women who are employed and educated as examples of women with traditional masculine behavior, and find that larger percentages of women alcoholics are more educated and employed than women in the general population. The authors do not directly interpret these results in terms of

social or psychological sex role conflict. Instead they believe that employment and education are changing women's lifestyles and placing them in a cultural context or interpersonal situation where drinking is the norm. Their data do suggest, however, that "orienting" context factors may be important, and are not inconsistent with role conflict.

Wilsnack (44, 45) makes the point that women's liberation and changing roles will not increase alcoholism by making it possible for women to be more like men, but rather decrease the stresses on women (and men) through the elimination of stereotypes and role conflicts and thus decrease alcoholism. Thus, one interpretation of Schuckit and Morrissey's (34) analyses is that the employed and educated women are more stressed and subject to social as well as intrapsychic conflicts. However, the changing norms associated with education and employment may themselves be sufficient to explain drinking behavior without invoking a conflict theory. Some of these ideas will be explored with the new data presented below.

Psychological Factors

Schuckit et al. (33) and Schuckit and Morrissey (34) have integrated the body of literature that showed high amounts of depression and low self-esteem in women alcoholics. Schuckit has delineated two basic subtypes of women who showed depression, and a subtype which does not. Depression in some alcoholic women may be a serious affective disorder that precedes the onset of alcoholism. Schuckit calls these women "secondary alcoholics" or "affective disorder alcoholics." Another subtype is identified as a "primary alcoholic," a woman with no pre-existing psychiatric disorder, but who later experiences depression as a result of drinking. Winokur et al (47) reports that the

primary women alcoholics tend to have greater similarities to male alcoholics than the secondary women alcoholics. Schuckit also cites evidence from a study (35) which found that secondary alcoholics have a better prognosis than primary alcoholics. It is estimated that approximately one quarter of women alcoholics are of the affective disorder (secondary) subtype whereas about five percent of men are. Finally, Schuckit's study of male alcoholics has identified 25 percent of male alcoholics as secondary sociopathic alcoholics, based on serious anti-social life styles prior to alcoholism; only 8 percent of the women in Schuckit's samples were found to be of this subtype. Even when SES was controlled, the sex differences remained; the sociopathic subtype was found to have poor prognosis. Each of these three types--the primary, secondary affective, and sociopathic alcoholic--is thus hypothesized to have somewhat separate sets of causal factors that all lead to alcoholism as an outcome. However, these differences in affective and sociopathic tendencies in men and women alcoholics parallel general differences between the sexes and thus may not be sufficient to explain alocholism, yet they should not be ignored as they may be important interactive factors. As in the case of sex role subtypes discussed above, research is also needed to define how, why, and when these disorders do and do not become related to alcoholism.

Social Background

Both Beckman (4) and Schuckit and Morrissey (34) maintain that SES may be useful in distinguishing types of female alcoholics, or at least should be taken into account when discussing a particular sample of alcoholics in terms of background factors. For example, Beckman (4) reports that low SES women alcoholics may be more likely to be public drinkers and have more marital

and childhood disruption. Schuckit and Morrissey (34) report the Rimmer et al. (29) finding that a group of higher SES women in treatment were, as compared to lower SES women, older, and a later age of onset, fewer prior hospitalizations, later age of drinking, and were less likely to report binges. These factors have been hypothesized to be true of all alcoholic women, but in actuality may be true of high SES subtypes only.

The lower status alcoholic women may be more similar in terms of symptoms to the male alcoholic (34). According to Beckman (4) the lower status alcoholic woman has been found to be less likely to have specific stressful problems prior to alcohol abuse. Rather she seems to have drinking problems emerging out of a lifestyle not unlike that of sociopathic males who typically begin drinking at a very early age. Thus the higher status subtype may be a concealed drinker with a more recent reaction to a specific life stress, while the lower status woman abuser may come from a life history of disruptions.

Other studies cited by Schuckit and Morrissey and Beckman substantiate these differences between high and low SES women. SES seems a discriminator of symptoms of alcoholics, as well as a separate background factor that may be related to potential causal factors in an individual's social relationships, such as child rearing practices, marital style, legal trouble, peer pressure, etc. That is, one's SES may not be a direct cause, but can be related to the factors that may lead to different subtypes of alcoholics. SES may also play a role in how the consumption is exhibited--the higher SES person in private, and the lower in public. SES is also related to women's lifestyles in terms of marital status and employment. SES and its correlates are thus important factors to take into account when identifying causes and implementing treatment and prevention programs for women alcoholics.

WOMEN'S SOCIAL ROLES AND DRINKING PATTERNS: NIAAA DATA

The foregoing research review yields a complex array of alternative explanations for drinking and alcohol abuse behaviors of women. Clearly, the NIAAA surveys cannot hope to provide any definitive conclusions about the relative importance of the many factors identified in past research. The present data are limited both in design, since the surveys are cross-sectional, and in scope, since few psychological variables are measured. Nonetheless, a number of fairly broad issues can be explored with the survey data; these can be subsumed under the rubric of "social sex roles."

Before proceeding with this analysis, further caveats are in order. 1) The survey data do not permit a rigorous definition of alcoholism comparable to that found among clinic populations, so that our findings are restricted to less severe forms of problem drinking. 2) Also, the analysis frequently depends upon relatively small subgroups susceptible to substantial random error. 3) It is also quite possible, as discussed above, that the questions asked were not appropriate to women's lifestyles. For all these reasons, the analysis here must be considered exploratory rather than confirmatory. And, again, it should be stressed that all percentages should not be seen as prevalence rates, but rather as relative to each other.

Social Sex Role Variables

Sociocultural variables such as age, employment, and marital status combine to form various "lifestyle" roles, each with rather broadly-defined sets of expected behaviors. For example, a woman who is young, single, and employed lives a different kind of life and is subjected to a different set of expected behaviors than a woman who is older, married, and not working outside

the home. Such lifestyle differences may give rise to different drinking patterns and different abuse rates.

Drinking patterns can be influenced by lifestyle or role factors according to a variety of distinct processes. First, drinking patterns can differ because of differing expectations associated with a particular role or lifestyle. For example, compared to a housewife a working woman may be exposed to a more frequent drinking environment in which conformity leads to increased consumption and possibly higher rates of abuse. Second, certain lifestyles or roles may be prone to greater stress arising from a number of sources, including role conflict (such as the married woman who works) and stresses inherent in certain lifestyles which are nontraditional for women. In the first instance the process can involve conformity to a particular normative context, with no stress involved; the second process also involves an intrapsychic stress mechanism in addition to social constraints. Of course, these two processes do not exhaust the list of possibilities, but they do illustrate that knowing a person's lifestyle or social role is not sufficient for identifying psychological mechanisms which might be causing a particular rate of alcohol abuse.

Social role factors can be further classified according to the extent to which they reflect traditional or nontraditional ideas of women's roles. Women in nontraditional roles might be subject to special conditions which influence alcohol abuse.

Traditional white middle class expectations for women have included being married, motherhood, and staying out of the work force. Because of these general expectations, not marrying (past a certain age), being divorced, or having a career are considered nontraditional roles. Further, if a woman does

pursue a full-time career, certain occupations are considered traditional, such as teacher, secretary, or clerk (17), while others are nontraditional, such as managers, craftsmen, or military. While many women find fulfillment in nontraditional roles, the fact remains that women in these roles may experience greater stress due to traditionalists' expectations. These stresses could give rise to heavier drinking and higher rates of alcohol abuse. Of course, higher rates could also be due to conformity to a different set of peer norms experienced by women in nontraditional roles.

A number of these social sex role variables are available for analysis in the 1975 survey. Specifically, we studied the following variables:

Marital status (single, married, divorced or separated, widowed)

Employment status (working, unemployed, not in labor force)

Head of household status

Having children at home

Traditional (e.g., clerical) vs. nontraditional (e.g., manager, craftsman) jobs

Socioeconomic status (SES)

Age

Race (Black or White)

Religion (Protestant vs. Catholic)

Region (wet vs. dry)

Urban vs. rural residence

In addition, various interactions were explored; for example, the combination of being both married and employed, or employed with children at home.

Using the method of multiple regression analysis, these variables were studied for their effects on three drinking variables: abstention (vs. drinking),

heavier drinking among drinkers, and problem drinking among drinkers.

Results

Since we conducted many exploratory regression analyses for each of the dependent variables under investigation, we will not present the detailed regression results. Rather, we will describe our findings and present the most important findings in tabular form. The reader should be aware, however, that all relationships emphasized (or de-emphasized) yielded consistent and significant (or nonsignificant) coefficients across many regression models.

The strongest correlates of abstention are age (older), SES (lower), religion (Protestant), and region (dry). Although we did find abstention to be lowest for single employed women and highest for widows (see Table 4), these factors did not have significant coefficients, suggesting that age is the explanatory variable.

The most important findings have to do with the correlates of heavier drinking and problem drinking among non-abstaining women. First, we did not find strong or consistent effects for the special role variables of nontraditional occupations, having children at home, and being the head of the household. Nor were there significant effects for the general social background factors of age, race, religion, region, and residence.

More important, certain combinations of employment and marital status were found to be strong correlates of both problem and heavier drinking for non-abstaining women. These relationships are shown in Table 4. Those women who are divorced or unemployed, regardless of other statuses (except being widowed) have the highest rates of both problem drinking and heavier drinking. A similar relationship was obtained for men.

From the standpoint of sex role issues, however, the most important

finding concerns employment: married women who are employed have significantly higher rates of both problem and heavier drinking than either single working women or housewives. No similar relationship occurs for men, raising the distinct possibility that this type of role for women is associated with an increased risk of alcoholism.

Although socioeconomic status did not have a significant coefficient in the regression analysis, more detailed analysis was undertaken to see whether the lower SES of working women might explain at least part of this relationship. To our surprise, the relationship is even stronger for women at middle and higher SES levels.

While working and being married is a nontraditional role for middle class women, we do not have any data that would allow us to distinguish what mechanism is operating to cause this elevated rate of abuse. One distinct possibility is that the roles are both stressful and/or the dual demands of being both wife and employee leads to role conflict and additional psychological stress which in turn causes increased involvement with alcohol. Alternatively, it may be that women in such nontraditional roles are in an environment controlled by traditional male drinking norms to which they conform. This second explanation appears less likely due to the lower problem rates of the single employed. Further research with more detailed psychological data is necessary to sort out these alternative explanations.

Implications

In summary, what can be said about future alcohol abuse rates if the proportion of married and employed women increases? The prediction depends to some extent on what type of mechanism is responsible for these elevated abuse rates. For example, if married working women are simply conforming to

heavier drinking norms, then our results would suggest a possible increase in women alcoholics as the proportion of women in these roles increases, as long as the norms for heavier drinking do not change.

However, if a role stress or role conflict process is occurring, brought about by a clash between what people expect from women who are in both traditional and non-traditional roles, then higher rates of abuse by women in non-traditional roles might well be a transitory phenomenon. A greater proportion of women in non-traditional roles might make the non-traditional more acceptable with a consequent reduction of stress and, ultimately, a reduction of alcohol abuse for women. Clearly, this is an issue of some urgency for further study.

Furthermore, if it is the case that role conflict and role related stress are factors that promote alcoholism in women, then current prevention efforts could benefit from Beckman's (4) suggestion that treatment not only help women to cope with these stresses but help society define sex roles so that such stresses do not occur in the first place.

Thus any measure that will reduce sex role stereotyping and discrimination (e.g., the Equal Rights Amendment) can have positive effects, as well as specific procedures employers and families might take to make life less stressful for the working wife. The preliminary and exploratory nature of the results reported point to the need for additional research specifically aimed at role related mechanisms and alcohol abuse.

Table 4

WOMEN'S SOCIAL ROLES AND DRINKING BEHAVIOR[ab]

Social Role[a]	Percent of Drinkers with Problems	Drinkers' Percent of Heavier Drinking	Number of Drinkers	Percent Drinkers	Total N
Divorced or Unemployed (except widowed)	22*	34*	(42)	39	(104)
Married and Employed	18*	27*	(72)	49	(147)
Single and Employed	7	15	(34)	61	(56)
Married, Not in Labor Force	8	17	(232)	46	(506)
All Widowed	3	13	(36)	20	(163)

*Statistically significant differences (.05 level) with other (non-starred) rates in the same column.

[a]Excludes 29 drinking women who are single and either are not in the labor force or have unknown employment status. Their combined problem rate is 21 percent.

[b]Excludes semi-abstainers (drink 1 to 6 times a year), who were not asked questions about drinking problems.

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